

Appl. No. 10/578,902
Amdt. dated April 11, 2008
Reply to Office action of December 11, 2007

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-5. (Canceled)

6. (Currently amended) In a piezoelectric actuator, comprising

a multilayered structure of piezoelectric layers, having a piezoelectrically active region, with internal electrodes that are situated between the layers and can be acted on with an electrical voltage, and having

inactive regions without internal electrodes in the top part and bottom part of the piezoelectric actuator, the improvement wherein

the dielectric constant of at least the top part or bottom part, as an inactive region, is less than the dielectric constant of the active region,

wherein the inactive regions and the active region are manufactured out of the same ceramic base substance and an additional doping agent is added to the inactive regions to minimize the dielectric constant.

Claim 7. (Canceled)

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8. **(Currently amended)** The piezoelectric actuator according to claim 6, ~~claim 7~~, wherein the base substance is lead zirconate titanate and the doping agent is silver.

9. **(Previously presented)** The piezoelectric actuator according to claim 6, wherein the layer thicknesses of the inactive regions are the same.

10. **(Currently amended)** The piezoelectric actuator according to claim 6, ~~claim 7~~, wherein the layer thicknesses of the inactive regions are the same.

11. **(Previously presented)** The piezoelectric actuator according to claim 8, wherein the layer thicknesses of the inactive regions are the same.

12. **(Previously presented)** The piezoelectric actuator according to claim 6, wherein the inactive regions are composed of an electrically polarized ceramic with an electrical field applied to it so as to minimize the dielectric constant.

13. **(Currently amended)** The piezoelectric actuator according to claim 6, ~~claim 7~~, wherein the inactive regions are composed of an electrically polarized ceramic with an electrical field applied to it so as to minimize the dielectric constant.

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14. **(Previously presented)** The piezoelectric actuator according to claim 8, wherein the inactive regions are composed of an electrically polarized ceramic with an electrical field applied to it so as to minimize the dielectric constant.

15. **(Previously presented)** The piezoelectric actuator according to claim 9, wherein the inactive regions are composed of an electrically polarized ceramic with an electrical field applied to it so as to minimize the dielectric constant.

16. **(Previously presented)** The piezoelectric actuator according to claim 10, wherein the inactive regions are composed of an electrically polarized ceramic with an electrical field applied to it so as to minimize the dielectric constant.

17. **(Previously presented)** The piezoelectric actuator according to claim 11, wherein the inactive regions are composed of an electrically polarized ceramic with an electrical field applied to it so as to minimize the dielectric constant.